

Appl. No. 09/834,234
Amdt. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the applications:

Listing of Claims

Claims 1-5 (canceled)

Claim 6 (currently amended) The A method of claim 5, for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node with the second agent further comprises the step of:

registering the mobile node with a third agent associated with one of the subnetworks, the third agent includes including a subnet agent.

Claim 7 (currently amended) The A method of claim 5, wherein for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and

Appl. No. 09/834,234
Amtd. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node with the second agent further includes the step of:

registering the mobile node with a third agent associated with one of the subnetworks, the third agent includes including a dynamic configuration protocol (DHCP) server.

Claim 8 (currently amended) The A method of claim 5, wherein for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second agent that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node with the second agent further comprises the step of:

registering the mobile node with a third agent associated with one of the subnetworks, the third agent includes including a dynamic configuration and registration protocol (DRCP) server.

Claim 9 (currently amended) The A method of claim 1, for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile

Appl. No. 09/834,234
Amdt. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node with the second agent further includes the step of:

registering the mobile node with a third agent associated with one of the subnetworks, and

wherein the second agent operates at a network layer.

Claim 10 (previously amended) A method for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent; and

providing by the mobile node the globally reachable global care-of address (GCOA) to the first agent.

Claim 11 (previously amended) The method of claim 10, further comprising

providing another network that includes a corresponding agent; and

providing by the mobile node the globally reachable global care-of address (GCOA) to the correspondent agent.

Claim 12 (previously amended) A method for facilitating intra-domain mobility, said method comprising the steps of:

mobile node; providing a first network that includes a first agent including location information about a

Appl. No. 09/834,234
Amtd. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

providing a second network that includes two or more subnetworks and a second agent;

registering the mobile node with the second agent such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from a home address of the mobile node to another subnetwork without communicating to the first agent information about the transition and without communicating to the second agent information about a security association between the mobile node and the first agent;

receiving in the first network communication addressed to the mobile node;

intercepting the communication by the first agent;

forwarding, at the first agent, the communication to the globally reachable global care-of address (GCOA);

intercepting the communication by the second agent; and

forwarding, at the second agent, the communication to the mobile node.

Claim 13 (previously amended) The method of claim 12, wherein the step of forwarding the communication to the mobile node comprises the steps of:

encapsulating the communication to include the local care-of address (LCOA) of the mobile node; and

sending the encapsulated communication to the LCOA.

Claim 14 (original) The method of claim 13, further comprising the steps of:

decapsulating the encapsulated communication by the third agent; and

forwarding the decapsulated communication to the mobile node.

Claim 15 (canceled)

Claim 16 (currently amended) The A method of claim 15 for facilitating intra-domain mobility, said method comprising the steps of:

providing a first network that includes a first agent including location information about a mobile node;

Appl. No. 09/834,234
Amtd. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

providing a second network that includes two or more subnetworks and at least two second agents;

registering the mobile node with one of the second agents such that the mobile node is provided a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the one second agent information about a security association between the mobile node and the first agent; and

wherein the step of registering the mobile node comprises the steps of:

providing a mobility server in the second network;

allocating dynamically by the mobility server one of the at least two second agents; and

registering the mobile node with the allocated second agent.

Claims 17 and 18 (canceled)

Claim 19 (currently amended) The A system of claim 17, for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;

a second network that includes two or more subnetworks and a second agent, wherein the second agent is programmed to provide the mobile node with a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without communicating to the second agent information about a security association between the mobile node and the first agent, and

wherein the second agent includes a dynamic tunneling agent and operates at a network layer.

Claim 20 (currently amended) The A system of claim 17, wherein for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;

a second network that includes two or more subnetworks and a second agent, wherein the second agent is programmed to provide the mobile node with a unique globally reachable address different from a home address of the mobile node, enabling the mobile node to transition from any of the subnetworks to another subnetwork without

Appl. No. 09/834,234
Amtd. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

communicating to the second agent information about a security association between the mobile node and the first agent; and

wherein the second agent includes a dynamic tunneling agent and the first network includes a home network.

Claim 21 (currently amended) The A system of claim 17, wherein for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;
a second network that includes two or more subnetworks and a second agent,
wherein the second agent is programmed to provide the mobile node with a unique
globally reachable address different from a home address of the mobile node, enabling
the mobile node to transition from any of the subnetworks to another subnetwork without
communicating to the second agent information about a security association between the
mobile node and the first agent; and

wherein the second agent includes a dynamic tunneling agent and the second network includes a foreign network.

Claim 22 (canceled)

Claim 23 (currently amended) The A system of claim 22, for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;
a second network that includes two or more subnetworks and a second agent,
wherein the second agent is programmed to provide the mobile node with a unique
globally reachable address different from a home address of the mobile node, enabling
the mobile node to transition from any of the subnetworks to another subnetwork without
communicating information to the first agent about the transition and without
communicating to the second agent information about a security association between the
mobile node and the first agent; and

wherein the second network includes a third agent associated with one of the
subnetworks and the third agent includes a subnet agent.

Claim 24 (currently amended) The A system of claim 22, wherein for facilitating intra-domain mobility, said system comprising:

a first network that includes a first agent having a home address of a mobile node;

Appl. No. 09/834,234
Amdt. Dated August 8, 2005
Reply to Office Action of June 25, 2005

APP 1301

a second network that includes two or more subnetworks and a second agent,
wherein the second agent is programmed to provide the mobile node with a unique
globally reachable address different from a home address of the mobile node, enabling
the mobile node to transition from any of the subnetworks to another subnetwork without
communicating information to the first agent about the transition and without
communicating to the second agent information about a security association between the
mobile node and the first agent; and

wherein the second network includes a third agent associated with one of the
subnetworks and the third agent includes a DHCP server.

Claim 25 (currently amended) ~~The A system of claim 22, wherein for facilitating intra-domain mobility, said system comprising:~~

a first network that includes a first agent having a home address of a mobile node;
a second network that includes two or more subnetworks and a second agent,
wherein the second agent is programmed to provide the mobile node with a unique
globally reachable address different from a home address of the mobile node, enabling
the mobile node to transition from any of the subnetworks to another subnetwork without
communicating information to the first agent about the transition and without
communicating to the second agent information about a security association between the
mobile node and the first agent; and

wherein the second network includes a third agent associated with one of the
subnetworks and the third agent includes a DRCP server.